REMARKS

Applicants submit this Amendment in response to the final Office Action mailed June 14, 2000. With entry of this Amendment, claims 1-11, 37-58 and 61-68 are pending in the application.

Allowability of Pending Claims.

The Examiner is thanked for notifying Applicants as to the allowability of claims 37-56.

Patentability under 35 U.S.C. § 112, First Paragraph.

Claims 6-11, 58 and 61-68 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly non-enabled by the specification. First, the Examiner alleges that the disclosure of the specification is not an embodiment of the claim language "produced . . . for a period of at least 30 days after the administration" and thus not correlative of the subject matter of the instant claims. Second, the Examiner alleges that there is a lack of correlation between animal model results and results in humans. Based on these two assertions, the Examiner alleges that it would require undue experimentation for one of skill in the art to practice the invention as claimed.

Applicants respectfully traverse the stated grounds for rejection and submit that present specification is enabling of the instant claims.

Nothing more than objective enablement is required in order to meet the requirements of 35 U.S.C. § 112(1). In particular, as stated by the Court of Customs and Patent Appeals:

> As a matter of Patent Office practice, then, a specification disclosure which contains a teaching of the manner and process of making and using the invention in terms which correspond in scope to those used in describing and defining the subject matter sought to be patented *must* be taken as in compliance with the enabling requirement of the first paragraph of § 112 *unless* there is a reason to doubt the objective truth of the statements contained therein which must be relied on for enabling support. *In re Marzocchi* 169 USPQ 367, 369 (C.C.P.A. 1971) (emphasis original)

In the instant case, as noted by the Examiner, Applicants have indeed shown that the subject invention can be utilized to produce expression of the factor VIII protein in the blood.

The Examiner however suggests that since "only 3 out of the 6 examples showed expression of the protein at any time for at least 30 consecutive days", that the claimed invention is not enabled. Applicants respectfully disagree. In particular, the animal models show that statistically significant long-term expression can be achieved. To the extent the Examiner asserts that such expression can not be correlated to expression in humans, the Examiner is respectfully encouraged to provide Applicants with evidence that the animal models provided are not indicative of utility in humans.

Hence, absent specific objective evidence to the contrary, Applicants respectfully submit that the claimed subject is indeed enabled, and that the rejection of claims 6-11, 58 and 61-58 under 35 U.S.C. §112, first paragraph, has been traversed.

Patentability under 35 U.S.C. § 103.

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Mulligan et al., U.S. Patent No. 5,674,722 in view of Mason et al., U.S. Patent No. 5,643,770 or Takeuchi et al., *J. Virol.* 68(12):8001-8007 (1994). Mulligan is cited for allegedly teaching a replication defective retrovirus (MFG) encoding factor VIII, that the MFG retrovirus is capable of infecting human cells and a factor VIII mutant having an SQN deletion. The Examiner concedes that Mulligan does not teach retroviruses resistant to degradation by human complement but alleges that Mason or Takeuchi remedy this deficiency. Thus, the Examiner asserts that it would have been obvious for one of skill in the art to make a replication defective recombinant retrovirus expressing human factor VIII and wherein the recombinant retrovirus is resistant to degradation by human complement as presently claimed.

Applicants respectfully traverse this ground of rejection. Briefly, where claimed subject matter has been rejected as obvious in view of a combination of prior art references, a proper analysis under §103 requires, *inter alia*, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed composition or device, or carry out the claimed process; and (2) whether the prior art would also have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success. *In re Vaeck*, 947 F.2d 488, 20 USPQ.2d 1438 (Fed. Cir. 1991)

In the instant case, the cited references do not provide to one of skill in the art a reasonable expectation of success to arrive at Applicants' claimed invention. In particular, while it might be obvious to try and produce complement-resistant retrovirus particles, the cited

references either alone or in combination do not provide to one of ordinary skill in the art a reasonable expectation of success in constructing complement-resistant retroviral particles capable of expression FVIII which can be utilized in an *in vivo* clinical setting.

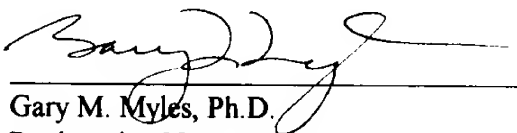
Moreover, Applicants respectfully submit that the presently claimed invention was conceived prior to either of the Mulligan, Mason or Takeuchi references. Accordingly, enclosed herewith, Applicants present a Declaration under 37 C.F.R. § 131 which Declaration provides evidence that Applicants conceived the present invention prior to either of the cited secondary references. (A signed Declaration will be submitted in due course.) Accordingly, Applicants submit that the present invention could not have been obvious in view of the cited references and respectfully request reconsideration and withdrawal of the present basis for rejection.

Claim 57 stands rejected under 35 U.S.C. § 103, as allegedly unpatentable over Kay et al., Science *262*:117-118 (1993), in view of either Mason or Takeuchi. Applicants respectfully traverse this basis for rejection. The Examiner concedes that Kay does not teach retroviruses that are resistant to degradation by human complements but alleges that Mason or Takeuchi remedy this deficiency. As discussed above, Applicants enclose herewith a Declaration under 37 C.F.R. § 131 which Declaration provides evidence that Applicants conceived the present invention prior to either Mason or Takeuchi. Because Kay alone does not teach the presently claimed invention and because neither Mason nor Takeuchi are citable against the present invention, Applicants submit that the present invention could not have been obvious in view of the cited references and respectfully request reconsideration and withdrawal of the present basis for rejection. Applicants respectfully submit that the rejection of claim 57 under 35 U.S.C. §103 has been traversed.

Based upon the above remarks and Declaration, Applicants respectfully submit that the pending claims are now in a condition for allowance.

Respectfully submitted,

Seed Intellectual Property Law Group PLLC



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Enclosures:

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